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(71) Applicant(s)
Visa U.S.A. Inc.

(72) Inventor(s)
Hammad, Ayman;Faith, Patrick;Carlson, Mark

(74) Agent / Attorney
Spruson & Ferguson, Level 35 St Martins Tower 31 Market Street, Sydney, NSW, 2000

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(71) Applicants *(for all designated States except US)*: **VISA INTERNATIONAL SERVICE ASSOCIATION** [US/US]; 900 Metro Center Boulevard, Foster City, California 94404 (US). **VISA U.S.A. INC.** [US/US]; P.O. Box 8999, M3-2B, San Francisco, California 94128 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CARLSON, Mark** [US/US]; 153 Miramonte Avenue, Half Moon Bay, California 94019 (US). **HAMMAD, Ayman** [US/US]; 6048 Corte Montanas, Pleasanton, California 94566 (US). **FAITH, Patrick** [US/US]; 2810 Jones Gate Court, Pleasanton, California 94566 (US).

(74) Agents: **MARTINEZ-LEMKE, Sheila P.** et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, California 94111 (US).

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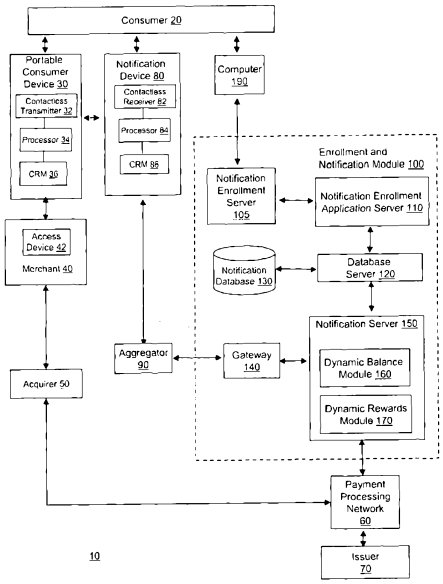

(57) Abstract: A method and a system that receive retrieve dynamic data when a notification with dynamic data is triggered. The dynamic data is associated with an account that is associated with a portable consumer device associated with a consumer. The method and system automatically send the notification with the dynamic data to a notification device, wherein the notification with the dynamic data is provided to the consumer.

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REAL-TIME BALANCE UPDATES

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This is a non-provisional patent application of and claims the benefit of the filing date of U.S. Provisional Patent Application No. 60/871,898 filed on December 26, 2006. This application is herein incorporated by reference in its entirety for all purposes.

BACKGROUND

[0002] Some prior systems send consumers notices regarding current transactions. For example, an issuer may notify a consumer when their cedit card is being used to make a large purchase. These prior systems often rely on contact information in the account information to notify the consumer. If, for example, only the consumer's home address is on file, the notice may not get to the consumer until well after the transaction has been completed.

[0003] Consumers with prepaid cards may want to know the balance left on their prepaid cards before a transaction or as soon as a transaction is completed. For example, a consumer may want to know whether they can afford to purchase a product with the prepaid card before they check out or even before they go to the store. Typically, a consumer contacts the issuer of their prepaid card such as a bank to determine their current balance on the prepaid card. In some cases, however, a prepaid card e.g. gift card may not be associated with an account with an issuer such as those cards purchased at retail stores. The consumer may not easily be able to get their current balance.

SUMMARY

[0004] It is an object of the present invention to substantially overcome, or at least ameliorate, one or more disadvantages of existing arrangements.

[0005] The present disclosure relates to automatic notifications, methods of providing and requesting automatic notifications, and systems that provide automatic notifications.

[0006] Disclosed are arrangements which seek to address the above problems by providing methods and systems of providing notifications with dynamic data to the consumer. Dynamic data refers to information that reflects all transactions on a portable consumer device made through the time a notification is triggered. An example of dynamic data is a real-time updated account balance. Examples of dynamic data include real-time updated account balance and a real-time updated rewards information associated

with an account on a portable consumer device. When triggered, a notification with dynamic data is sent to the notification device e.g. cellular phone. The notification can be triggered on a periodic basis or when the consumer uses their portable consumer device to make a transaction. The notification can also be triggered when the consumer requests the dynamic data. For example, consumer could request dynamic data by placing their portable consumer device next to their notification device so that a transmitter in the portable consumer device sends a request to a receiver in the notification device. The consumer could also request the dynamic data by selecting a programmed key on their notification device. Dynamic data is then delivered to the notification device and provided to the consumer if the consumer is enrolled to receive the notification.

[0007] According to one aspect there is provided a method comprising:

when a notification with dynamic data is triggered, retrieving the dynamic data associated with an account associated with a portable consumer device associated with a consumer;

automatically sending the notification with the dynamic data to a notification device of the consumer, wherein the notification with the dynamic data is provided to the consumer; and

wherein the notification is triggered by a transaction being conducted using a portable consumer device associated with the consumer, wherein the dynamic data is based on an amount of the transaction being conducted.

[0008] According to another aspect there is provided a method comprising:

triggering a notification with dynamic data using a notification device of a consumer, the dynamic data associated with an account associated with a portable consumer device associated with the consumer; and

receiving the notification on the notification device;

wherein notification is triggered by placing the notification device near the portable consumer device.

[0009] According to another aspect there is provided a system comprising:

a payment processing network for generating and storing dynamic data; and

a notification server coupled to the payment processing network, the notification server configured to:

when a notification with dynamic data is triggered, retrieve the dynamic data from the payment processing network, the dynamic data associated with an account associated with a portable consumer device associated with a consumer;

automatically send the notification with the dynamic data to the notification device of the consumer, wherein the notification with dynamic data is provided to the consumer;

wherein the notification is triggered by a transaction being conducted using a portable consumer device associated with the consumer, wherein the dynamic data is based on an amount of the transaction being conducted.

[0010] According to another aspect there is provided a phone, comprising:

a processor;

a receiver coupled to the processor;

an output device coupled to the processor; and

a computer readable medium coupled to the processor, the computer readable medium includes code for displaying a notification including dynamic data to the output device of a consumer after a portable consumer device is used by the consumer, wherein the dynamic data is based on an amount of the transaction being conducted.

[0010a] According to another aspect there is provided a method comprising:

when a notification with dynamic data is triggered, retrieving the dynamic data associated with an account associated with a portable consumer device associated with a consumer;

automatically sending the notification with the dynamic data to a notification device of the consumer, wherein the notification with the dynamic data is provided to the consumer;

wherein the dynamic data is a real-time rewards information update.

[0011] These and other embodiments of the invention are described in further detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 is a block diagram illustrating a dynamic data notification system, in accordance with an embodiment of the invention.

[0013] FIG. 2 is a flow chart illustrating a method of providing dynamic data notifications, in accordance with an embodiment of the invention.

[0014] FIG. 3 is a schematic drawing of a cellular phone displaying a real-time balance update, in accordance with an embodiment of the invention.

DETAILED DESCRIPTION

[0015] Embodiments of the invention are directed to a method of providing notifications with dynamic data, a method of requesting notifications with dynamic data, and a dynamic data notification system. More specifically, a notification with dynamic data is triggered when the consumer requests the notification or when the consumer uses the portable consumer device. The consumer can also have notifications automatically sent to the notification device on a periodic basis. Once the notification is triggered, dynamic data is retrieved and delivered to the notification device if the consumer is enrolled to receive the notification.

[0016] Certain embodiments of the invention may provide one or more technical advantages to issuers and consumers. One technical advantage to a consumer may be knowing their current balance or rewards available on their card without having to

contact the issuer which could save time and could save the consumer money. Another technical advantage to a consumer may be that the consumer can request the current balance left on their card so that they can determine whether they have sufficient funds or credit to make a purchase or complete a transaction. A technical advantage to an issuer may be that automatic notifications are sent to consumers and issuer does not have to provide notifications by other means.

[0017] Certain embodiments of the invention may include none, some, or all of the above technical advantages. One or more other technical advantages may be readily apparent to one skilled in the art from the figures, descriptions, and claims included herein.

[0018] **FIG. 1** is a block diagram illustrating a dynamic data notification system **10**, in accordance with an embodiment of the invention. Dynamic data notification system **10** includes a consumer **20**, a portable consumer device **30**, a merchant **40**, an acquirer **50**, a payment processing network **60**, an issuer **70**, a notification device **80**, an aggregator **90**, an enrollment and notification module **100**, and a computer **190**. Although one consumer **20**, one portable device **30**, one merchant **40**, one acquirer **50**, one issuer **70**, one notification device **80**, and one computer **190** are shown, there may be any suitable number of any of these entities in dynamic data notification system **10**.

[0019] Dynamic data notification system **10** includes a consumer **20** in operative communication with portable consumer device **30**. Dynamic data notification system **10** also includes a merchant **40** having an access device **42** for interacting with portable consumer device **30** and an acquirer **50** associated with merchant **40**. Acquirer **50** is in communication with issuer **70** through payment processing network **60**.

[0020] Dynamic data notification system **10** also includes a notification device **80** in operative communication with consumer **20** for displaying notifications to consumer **20** and for receiving request or instructions for notifications from consumer **20**. Notification device **80** is also in communication with portable consumer device **30** for receiving a request for a notification from consumer **20**.

[0021] Dynamic data notification system **10** also includes an enrollment and notification module **100** for processing notifications and an aggregator **90** for

collecting and forwarding notifications from enrollment and notification module **100** to notification device **80**. Dynamic data notification system **10** also includes a computer **190** in communication with enrollment notification module **100** and consumer **20**. Consumer can use computer **190** to receive notifications and to enroll in notifications. Dynamic data notification system **10** also includes a payment processing network **60** that is in communication with enrollment and notification module **100**, with acquirer **50**, and with issuer **70**.

[0022] Consumer **20** refers to an individual or organization such as a business that is capable of purchasing goods or services or making any suitable transaction with merchant **40**.

[0023] Portable consumer device **30** refers to any suitable device that allows the transaction to be conducted with merchant **40**. Portable consumer device **30** may be in any suitable form. For example, suitable portable consumer devices **30** can be hand-held and compact so that they can fit into a consumer's wallet and/or pocket (e.g., pocket-sized). They may include smart cards, magnetic stripe cards, keychain devices (such as the Speedpass™ commercially available from Exxon-Mobil Corp.), etc. Other examples of portable consumer devices **30** include cellular phones, personal digital assistants (PDAs), pagers, payment cards, security cards, access cards, smart media, transponders, and the like. In some cases, portable consumer device **30** may be associated with an account of consumer **20** such as a bank account.

[0024] In the illustrated example, portable consumer device **30** includes a contactless transmitter **32** for sending wireless signals, a processor **34**, and a computer readable medium (CRM) **36**. These elements of portable consumer device **30** are in communication with each other. Processor **34** (e.g., a microprocessor) processes the functions of portable consumer device **30**.

[0025] Contactless transmitter **32** refers to any suitable device for sending wireless signals with information stored in memory (e.g. CRM **36**) on portable consumer device **30** to notification device **80**. Contactless transmitter **32** transmits signals using a near field communications (NFC) capability to send information from portable consumer device **30** to the contactless receiver **82** on notification device **82**. Typically, NFC capability is in accordance with a standardized protocol or data

transfer mechanism (e.g., ISO 14443/NFC). Some examples of NFC capability are radio-frequency identification (RFID), Bluetooth™, infra-red, and other suitable communications capability. In other embodiments, contactless transmitter **32** transmits information via a cellular network by means of an interface (not shown). The interface functions to permit exchange of data between the cellular network (not shown) and contactless transmitter **32**.

[0026] CRM **36** may be on the body of portable consumer device **30**. The body may in the form of a plastic substrate, a housing, or other structure. CRM **36** may be a memory that stores data and may be in any suitable form. Exemplary CRM **36** may be in any suitable form including a magnetic stripe, a memory chip, etc. If portable consumer device **30** is in the form of a card, it may have an embossed region (ER) which is embossed with a PAN (primary account number). CRM **36** may electronically store the PAN as well as other data such as PIN data.

[0027] Merchant **40** refers to any suitable entity or entities that makes a transaction with consumer **20**. Merchant **40** may use any suitable method to make the transaction. For example, merchant **40** may use an e-commerce business to allow the transaction to be conducted by merchant **40** through the Internet. Other examples of merchant **40** include a department store, a gas station, a drug store, a grocery store, or other suitable business.

[0028] Access device **42** may be any suitable device for communicating with merchant **40** and for interacting with portable consumer device **30**. Access device **42** can be in any suitable location such as at the same location as merchant **40**. Access device **42** may be in any suitable form. Some examples of access devices **42** include POS devices, cellular phones, PDAs, personal computers (PCs), tablet PCs, handheld specialized readers, set-top boxes, electronic cash registers (ECRs), automated teller machines (ATMs), virtual cash registers (VCRs), kiosks, security systems, access systems, websites, and the like. Access device **42** may use any suitable contact or contactless mode of operation to send or receive data from portable consumer devices **30**.

[0029] If access device **42** is a POS terminal, any suitable POS terminal may be used and may include a reader, a processor, and a computer readable medium. Reader may include any suitable contact or contactless mode of operation. For

example, exemplary card readers can include radio frequency (RF) antennas, optical scanners, bar code reader, magnetic stripe readers, etc. to interact with portable consumer device **30**.

[0030] Acquirer **50** refers to any suitable entity that has an account with merchant **40**. In some embodiments, issuer **70** may also be acquirer **50**.

[0031] Issuer **70** refers to any suitable entity that may open and maintain an account associated with portable consumer device **30** for consumer **20**. Some examples of issuers may be a bank, a business entity such as a retail store, or a governmental entity. In many cases, issuer **70** may also issue portable consumer device **30** associated with the account to consumer **20**.

[0032] Payment processing network **60** refers to a network of suitable entities that have information related an account associated with portable consumer device **30**. This information includes data associated with the account on portable consumer device **30** such as profile information, dynamic data, and other suitable information. Dynamic data refers to any suitable information that is updated to reflect the transactions made using portable consumer device **30**.

[0033] Although not shown in the illustrated embodiment, payment processing network **60** may have or operate a server computer and may include a database. The database may include any hardware, software, firmware, or combination of the preceding for storing and facilitating retrieval of information. Also, the database may use any of a variety of data structures, arrangements, and compilations to store and facilitate retrieval of information. The server computer may be coupled to the database and may include any hardware, software, other logic, or combination of the preceding for servicing the requests from one or more client computers. Server computer may use any of a variety of computing structures, arrangements, and compilations for servicing the requests from one or more client computers. In one embodiment, the server computer may be a powerful computer or cluster of computers. For example, the server computer can be a large mainframe, a minicomputer cluster, or a group of servers functioning as a unit. In one example, the server computer may be a database server coupled to a Web server. Server computer services the requests of one or more client computers.

[0034] Payment processing network **60** may include data processing subsystems, networks, and operations used to support and deliver authorization services, exception file services, and clearing and settlement services. An exemplary payment processing network **60** may include VisaNet™. Networks that include VisaNet™ are able to process credit card transactions, debit card transactions, and other types of commercial transactions. VisaNet™, in particular, includes a VIP system (Visa Integrated Payments system) which processes authorization requests and a Base II system which performs clearing and settlement services. Payment processing network **60** may use any suitable wired or wireless network, including the Internet.

[0035] Notification device **80** refers to any suitable device for receiving notifications and for providing the notifications to consumer **20**. Notifications refer to communications of dynamic data to consumer **20** on notification device **80**. Notifications may be in any suitable form and may be delivered by any suitable method. Some examples of notifications includes a phone call, a voice message, a voicemail message, a short message service (SMS) message e.g. a text message, an instant messaging (IM) message, or an email message, or a periodically updated display on a device. An exemplary embodiment of a notification is a real-time balance update. The real-time balance update is a communication to notify consumer **20** of the funds available (balance) on portable consumer device **30** after the last transaction is accounted for. Another embodiment of a notification is real-time rewards information update that is a communication to notify consumer **20** of rewards available for redemption after the last transaction.

[0036] Dynamic data refers to any suitable information that reflects all transactions on a portable consumer device **30** made through the time a notification of the dynamic data is triggered. Dynamic data relates to an account associated with a portable consumer device **30** associated with consumer **20**. For example, dynamic data can be account balances such as credit card account balances, stored value account balances, rewards balances, checking account balances, savings account balances, investment account balances, brokerage account balances, and other suitable account balances.

[0037] Notification device **80** may be in any suitable form. For example, suitable notification devices **80** can be hand-held and compact so that they can fit into a consumer's wallet and/or pocket (e.g., pocket-sized). Some examples of notification device **80** include desktop or laptop computers, cellular phones (e.g., as shown in FIG. 3), personal digital assistants (PDAs), pagers, payment cards, security cards, access cards, smart media, transponders, and the like. In some embodiments, notification device **80** and portable consumer device **30** are embodied in the same device.

[0038] Notification device **80** includes a contactless receiver **82** for receiving wireless signals, a processor **84** coupled to the receiver **82**, and a computer readable medium (CRM) **36** coupled to processor **84**. Although not shown, notification device **80** may also include one or more input devices (e.g., keypads) or output devices (e.g., displays, speakers) coupled to processor **84**. Contactless receiver **82** refers to any suitable device for receiving wireless signals. The signals are received by contactless receiver **82** by any suitable method (e.g., using NFC capability). In one example, contactless receiver **82** receives a wireless signal with a request for a notification from contactless transmitter **32** of portable consumer device **30**. In another example, contactless receiver **82** receives a wireless signal with a notification(s) from aggregator **90** via a cellular network. Processor **84** (e.g., a microprocessor) processes the functions of notification device **80**. CRM **86** comprises code for processing requests for notifications, for receiving notifications, and for providing notifications to consumer **20**. An example of code for providing notifications to consumer **20** includes code for displaying notifications including dynamic data to an output device.

[0039] Consumer **20** uses computer **190** to receive notifications and/or enroll in a program to receive notifications. Computer **190** can be a desktop computer, a laptop computer, a cellular or mobile phone, a personal digital assistant (PDA), or other suitable device.

[0040] Enrollment and notification module **100** comprises a notification enrollment server **105**, a notification enrollment application server **110**, a database server **120**, a notification database **130**, a notification server **150** having a dynamic balance module **160** and a dynamic rewards module **170**, and a gateway **140**. Notification

enrollment server **105** in communication with a notification enrollment application server **110** which is in communication with database server **120** for storing and retrieving information to and from notification database **130**. Database server **120** is also in communication with notification server **150**. Notification server **150** is also in communication with gateway **140**, dynamic balance module **160**, and dynamic rewards module **170**. Although enrollment and notification module **100** is shown as being separate from issuer **70**, enrollment and notification module **100** can be at issuer **70** in some embodiments. In these embodiments, issuer **70** processes the notifications sent to notification device **80**.

[0041] Notification enrollment server **105** refers to a device that receives enrollment information from consumer **20** via computer **190** and sends the enrollment information to notification enrollment application server **110**. Notification enrollment application server **110** receives the enrollment information from consumer **20** through notification enrollment server **105** or from issuer **70** and may store the enrollment information in notification database **130**. Notification database **130** may receive and store new or updated enrollment information and other account information.

[0042] Enrollment information includes trigger information that describes the occurrences that must take place to trigger notifications and the types of dynamic data that consumer **20** wants to receive in the notifications. Consumer **20** may define the trigger information when enrolling in a program to receive notifications.

[0043] In some cases, notifications are triggered by actions taken by consumer **20** or another suitable entity. For example, a notification may be triggered by using of portable consumer device **30** at access device **42** by consumer **20** or by merchant **40**. In another example, a notification may be triggered by the sending of a request by consumer **20** for a notification using portable consumer device **30**, notification device **80**, computer **190**, or other suitable device. In yet another example, a notification may be triggered by placing portable consumer device **30** near notification device **80** so that a signal with a request for a notification is transmitted from contactless transmitter **32** on portable consumer device **30** to contactless receiver **82** on notification device **80**. In another example, a notification may be triggered by the completion of a transaction on an account associated with portable

consumer device **30**. In other cases, periodic notifications may be triggered by the termination a time period defined by consumer **20**. Examples of a time period include a week, a day, and an hour. For example, if consumer **20** selects the time period of a day, daily notifications will be sent to notification device **80**. Typically, daily notifications would be sent at approximately the same time every day.

[0044] Notification server **150** includes dynamic balance module **160** for processing notifications with dynamic balances and dynamic rewards module **170** for processing notifications with dynamic rewards information.

[0045] Notification server **150** processes notifications with dynamic data and sends the notifications through gateway **140** to aggregator **90**. If the dynamic data is a dynamic balance, dynamic balance module **160** processes the notification. If the dynamic data is dynamic rewards, dynamic rewards module **170** processes the notification. Gateway **140** is a any suitable device that converts information from the protocol or format used in enrollment and notification module **100** to those used in aggregator **90**. Aggregator **90** refers to any suitable entity or device that receives notifications, collects the notifications, and transmits the notifications to notification device **80** for consumer **20**. In some cases, aggregator **90** may be a wireless telephone company.

[0046] Notification server **150** is triggered to send a notification with dynamic data and processes the notification. Notification server **150** retrieves enrollment information with trigger information from notification database **130** using database server **120**. Notification server **150** confirms that consumer **20** is enrolled to receive the notification triggered based on the trigger information. Notification server **150** retrieves the dynamic data from issuer **70** or other suitable entity and sends the notification with the dynamic data through gateway **140** to aggregator **90**. Aggregator **90** collects notifications according to enrollment information and forwards the notifications to notification device **80**. If the notification triggered is associated with dynamic balance data, dynamic balance module **160** processes the notification. If the notification triggered is associated with dynamic rewards data, dynamic rewards module **170** processes the notification.

[0047] In one example embodiment, consumer **20** enrolls in a program using computer **190** to receive notifications on their notification device **80** (e.g. a cellular

phone) in the form of text or voice messages. Consumer **20** enrolls to receive notifications with the dynamic balance on the account associated with their portable consumer device **30** (e.g. a prepaid or gift card). Consumer **20** specifies that the notification will be sent every time portable consumer device **30** interacts with access device **42**.

[0048] In a typical payment transaction, consumer **20** uses portable consumer device **30** at access device **42** to purchase goods or services from merchant **40**. For example, a consumer may use a gift card with $50 to buy a $25 game cartridge at a toy store using a POS (point of sale) terminal at the toy store. The consumer may swipe the gift card through a slot in the POS terminal and the POS terminal may read data including an account number from the gift card.

[0049] An authorization request message is then forwarded to acquirer **50** and acquirer **50** forwards the message through payment processing network **60** to issuer **70**. Using portable consumer device **30** at access device **42** triggers notification server **150** to send a notification.

[0050] Issuer **70** determines whether or not to authorize the transaction. The transaction may be authorized if there are sufficient funds, and may be declined if there are insufficient funds. An authorization response message is then sent back through payment processing network **60** to acquirer **50** who forwards it to merchant **40**. At the end of the day, a normal clearing and settlement process can be conducted by payment processing network **60**. A clearing process is a process of exchanging financial details between and acquirer and an issuer to facilitate posting to a consumer's account and reconciliation of the consumer's settlement position.

[0051] In this example, the notification triggered is associated with a dynamic balance and dynamic balance module **160** processes the notification. Dynamic balance module **160** is triggered to send a notification when consumer used portable consumer device **30**. For example, dynamic balance module **160** may receive information that the previously described and registered gift card has been used to purchase a $25 game cartridge.

[0052] Dynamic balance module **160** retrieves enrollment information with trigger information from notification database **130** using database server **120.** Dynamic balance module **160** uses the trigger information to confirm that consumer **20** wants

to receive the notification that has been triggered. Dynamic balance module **160** also determines from the trigger information that consumer **20** wants to receive the triggered notification in the form of a text message. Dynamic balance module **160** retrieves the dynamic balance on the account associated with portable consumer device **30**. For example, the module **160** may determine that there is the balance on the gift card is $25. The dynamic balance will reflect the last transaction authorized including the transaction associated with the action of using portable consumer device **30** that triggered the notification. Dynamic balance module **160** sends a text message with the dynamic balance to notification device **80**. For example, the text message may indicate that the gift card now has a balance of $25 after buying the $25 game cartridge. Notification device **80** provides the text message to consumer **10**. For example, the consumer's phone may display the balance of $25 plus the account number associated with the gift card. Consumer **20** may thereafter store this information in the notification device **80** for future use in determining how much money is left on the portable consumer device **30**.

[0053] Modifications, additions, or omissions may be made to dynamic data notification system **10** without departing from the scope of the disclosure. The components of dynamic data notification system **10** may be integrated or separated according to particular needs. Moreover, the operations of dynamic data notification system **10** may be performed by more, fewer, or other system modules. Additionally, operations of dynamic data notification system **10** may be performed using any suitable logic comprising software, hardware, other logic, or any suitable combination of the preceding.

[0054] **FIG. 2** is a flow chart illustrating a method of providing dynamic data notifications, in accordance with an embodiment of the invention.

[0055] Consumer **20** enrolls in a program using computer **190** to receive notifications on their portable consumer device **30** (step **200**). Computer **190** sends enrollment information from consumer **20** to notification enrollment server **105**. Notification enrollment server **105** sends the enrollment information to notification enrollment application server **110**. Notification enrollment application server **110** sends the enrollment information to database server **120** to store it in notification database **130**.

[0056] A notification is triggered (step **210**). Notification server **150** detects that the notification has been triggered. Consumer **20** or other suitable entity triggers the notification.

[0057] In one embodiment, consumer **20** or other suitable entity triggers a notification by using portable consumer device **30** at access device **42**. In some cases, a notification is only triggered if the transaction is authorized and completed. When portable consumer device **30** is used, information indicating that a notification has been triggered is sent from access device **42** to acquirer **50** which forwards it to notification server **150** through payment processing network **60**.

[0058] In another embodiment, consumer **20** triggers a notification by requesting it on notification device **80** or computer **190** which forwards the request for a notification to notification server **150**. For example, consumer **20** may request a notification by selecting a programmed button on their cellular phone. The cellular phone sends the request to notification server **150**.

[0059] In another embodiment, consumer **20** triggers a notification by placing portable consumer device **30** next to notification device **80**. A signal with a request for a notification is emitted from contactless transmitter **32** in portable consumer device **30** and received by contactless receiver **82** on notification device **80**. Notification device **80** forwards the request to notification server **150**.

[0060] In yet another embodiment, a notification is triggered automatically on a periodic basis by notification server **150**. Typically, the notification is triggered at the end of the time period although any time during that time period can be used. Consumer **20** selects the time period such as daily, hourly, or weekly. For example, consumer **20** can select daily notifications sent at 12:00 a.m.

[0061] In one example embodiment, consumer **20** enrolls in a program using computer **190** to receive notifications on their notification device **80** e.g. cellular phone in the form of email messages. Consumer **20** enrolls to receive notifications with the dynamic balance on the account on their portable consumer device **30** e.g. a prepaid card. Consumer **20** specifies that the notification will be sent every time portable consumer device **30** interacts with access device **42**.

[0062] Notification server **150** retrieves enrollment information (step **220**) retrieved from notification database **130** using database server **120**. The enrollment information is associated with an account on portable consumer device **30**. In embodiments where consumer **20** requested the notification, notification server **150** may skip retrieving the enrollment information and checking enrollment for the notification (steps **220** and **230**) and go to retrieving dynamic data (step **240**).

[0063] Notification server **150** analyzes trigger information in the enrollment information to determine whether consumer **20** is enrolled to receive the notification that has been triggered (step **230**). If consumer **20** is not enrolled for the notification, the method ends (step **270**) and a notification is not sent to consumer **20**.

[0064] If consumer **20** is enrolled to receive the notification, notification server **150** retrieves the dynamic data (step **240**). Notification server **150** generates a notification with the dynamic data and sends it to aggregator **90** through gateway **140**. Aggregator **90** forwards the notification to notification device **160** for delivery to consumer **20** (step **250**). Notification device **80** provides the notification to consumer **20** (step **260**).

[0065] In one embodiment, the notification may be shown to consumer **20** on a screen on notification device **80**. The display of the notification may be a text message displayed on a screen or other suitable display until consumer **20** turns off the display. In other cases, the notification may be displayed for a predetermined period of time.

[0066] In another embodiment, the notification may be sent to consumer in the form of a voice message or voicemail message to consumer **20**. For example, the notification may be an automated voice announcement that is sent to the notification device **20**.

[0067] After providing the notification, the method ends (step **270**). Modifications, additions, or omissions may be made to the method without departing from the scope of the disclosure. The method may include more, fewer, or other steps. Additionally, steps may be performed in any suitable order without departing from the scope of the disclosure.

[0068] FIG. 3 is a schematic drawing of a cellular phone displaying a real-time balance update, in accordance with an embodiment of the invention. Notification device **80** includes a display **320** for displaying information such as notifications with dynamic data, buttons **330** for inputting information such as requests for notifications, a speaker (not shown) to send aural signals to consumer **20**, and a microphone (not shown) to receive aural signals from consumer **20**.

[0069] Display **320** includes a dynamic data display **322** for displaying the notification of the updated dynamic data consumer **20**. In the illustrated example, dynamic data display **322** is showing the real-time balance update on the account associated with portable consumer device **30**. Dynamic data can be updated at any suitable time. Some examples of when the dynamic data is updated include when consumer requests the dynamic data, when consumer **20** uses portable consumer device **30**, or periodically.

[0070] Buttons **330** include a balance request button **334** for requesting a real-time balance update and a rewards request button **336** for requesting a real-time rewards information update. Display **320** also includes a balance request button indicator **324** indicating that selecting balance request button **334** will request a real-time balance update. Display **320** also includes a rewards request button indicator **326** indicating that selecting rewards request button **336** will request a real-time rewards information update.

[0071] In operation, consumer **20** selects balance request button **334** to display real-time balance update on dynamic data display **322**. The request is forwarded to notification server **150**. Notification server **150** retrieves the real-time balance from issuer **70** or other suitable entity over payment processing network **60**. Notification server **150** sends the real-time balance update to notification device **80** and notification device **80** displays the update to consumer **20**.

[0072] Modifications, additions, or omissions may be made to notification device **80** without departing from the scope of the disclosure. For example, notification device **80** and portable consumer device **30** may be integrated into the same device. Also, the components of notification device **80** may be integrated or separated according to particular needs. Moreover, the operations of notification device **80** may be performed by more, fewer, or other modules. Additionally, operations of notification

device **80** may be performed using any suitable logic comprising software, hardware, other logic, or any suitable combination of the preceding.

[0073] It should be understood that the present disclosure as described above can be implemented in the form of control logic using computer software in a modular or integrated manner. Based on the disclosure and teachings provided herein, a person of ordinary skill in the art will know and appreciate other ways and/or methods to implement the present disclosure using hardware and a combination of hardware and software.

[0074] Any of the software components or functions described in this application, may be implemented as software code to be executed by a processor using any suitable computer language such as, for example, Java, C++ or Perl using, for example, conventional or object-oriented techniques. The software code may be stored as a series of instructions, or commands on a computer readable medium, such as a random access memory (RAM), a read only memory (ROM), a magnetic medium such as a hard-drive or a floppy disk, or an optical medium such as a CD-ROM. Any such computer readable medium may reside on or within a single computational apparatus, and may be present on or within different computational apparatuses within a system or network.

[0075] A recitation of "a", "an" or "the" is intended to mean "one or more" unless specifically indicated to the contrary.

[0076] The above description is illustrative and is not restrictive. Many variations of the disclosure will become apparent to those skilled in the art upon review of the disclosure. The scope of the disclosure should, therefore, be determined not with reference to the above description, but instead should be determined with reference to the pending claims along with their full scope or equivalents.

[0077] One or more features from any embodiment may be combined with one or more features of any other embodiment without departing from the scope of the disclosure.

2007339930 07 May 2012

The claims defining the invention are as follows:

1. A method comprising:

when a notification with dynamic data is triggered, retrieving the dynamic data associated with an account associated with a portable consumer device associated with a consumer;

automatically sending the notification with the dynamic data to a notification device of the consumer, wherein the notification with the dynamic data is provided to the consumer; and

wherein the notification is triggered by a transaction being conducted using a portable consumer device associated with the consumer,

wherein the dynamic data is based on an amount of the transaction being conducted.

2. A method of claim 1, wherein the dynamic data is a real-time balance update.

3. A method of claim 1, wherein the dynamic data is a real-time rewards information update.

4. A method of claim 1, further comprising:

retrieving enrollment information; and

confirming that consumer is enrolled to receive the notification based on the enrollment information.

5. A method of claim 1, wherein the notification is triggered based on a time period predefined by the consumer,

wherein automatically sending the notification to the notification device includes periodically sending the notification to the notification device based on the predefined time period.

6. A method of claim 1, wherein the notification is triggered by a request for the notification with dynamic data sent from the notification device.

7. A method of claim 1, wherein the notification is triggered by a signal sent from a contactless transmitter on portable consumer device to a contactless receiver on the notification device.

8. A method of claim 1, wherein the notification with dynamic data is provided to consumer on a display.

9. A method of claim 1,

wherein the notification device is a phone, and

wherein the notification sent to the notification device includes at least one of a phone call, voicemail, SMS, IM, or email.

10. A method comprising:

triggering a notification with dynamic data using a notification device of a consumer, the dynamic data associated with an account associated with a portable consumer device associated with the consumer; and

receiving the notification on the notification device;

wherein notification is triggered by placing the notification device near the portable consumer device.

11. A system comprising:

a payment processing network for generating and storing dynamic data; and

a notification server coupled to the payment processing network, the notification server configured to:

when a notification with dynamic data is triggered, retrieve the dynamic data from the payment processing network, the dynamic data associated with an account associated with a portable consumer device associated with a consumer;

automatically send the notification with the dynamic data to the notification device of the consumer, wherein the notification with dynamic data is provided to the consumer;

wherein the notification is triggered by a transaction being conducted using a portable consumer device associated with the consumer,

wherein the dynamic data is based on an amount of the transaction being conducted.

12. The system of claim 11, wherein the notification server is further configured to:

retrieve enrollment information; and

confirm that consumer is enrolled to receive the notification based on the enrollment information.

13. The system of claim 11, wherein the notification is triggered based on a time period predefined by the consumer, and

wherein automatically sending the notification to the notification device includes periodically sending the notification to the notification device based on the predefined time period.

14. The system of claim 11, wherein the notification is triggered by a request for the notification with dynamic data sent from the notification device.

15. The system of claim 11, wherein the notification is triggered by a signal sent from a contactless transmitter on portable consumer device to a contactless receiver on the notification device.

16. A phone, comprising:

a processor;

a receiver coupled to the processor;

an output device coupled to the processor; and

a computer readable medium coupled to the processor, the computer readable medium includes code for displaying a notification including dynamic data to the output device of a consumer after a portable consumer device is used by the consumer,

wherein the dynamic data is based on an amount of the transaction being conducted.

17. The phone of claim 16, wherein the dynamic data is a balance associated with the portable consumer device.

18. The phone of claim 16, wherein the portable consumer device is a prepaid card.

19. A method of claim 1, wherein the portable consumer device and the notification device of the consumer are embodied in one device.

20. A method comprising:

when a notification with dynamic data is triggered, retrieving the dynamic data associated with an account associated with a portable consumer device associated with a consumer;

automatically sending the notification with the dynamic data to a notification device of the consumer, wherein the notification with the dynamic data is provided to the consumer;

wherein the dynamic data is a real-time rewards information update.

21. A method substantially as hereinbefore described with reference to any one of the embodiments as that embodiment is shown in the accompanying drawings.

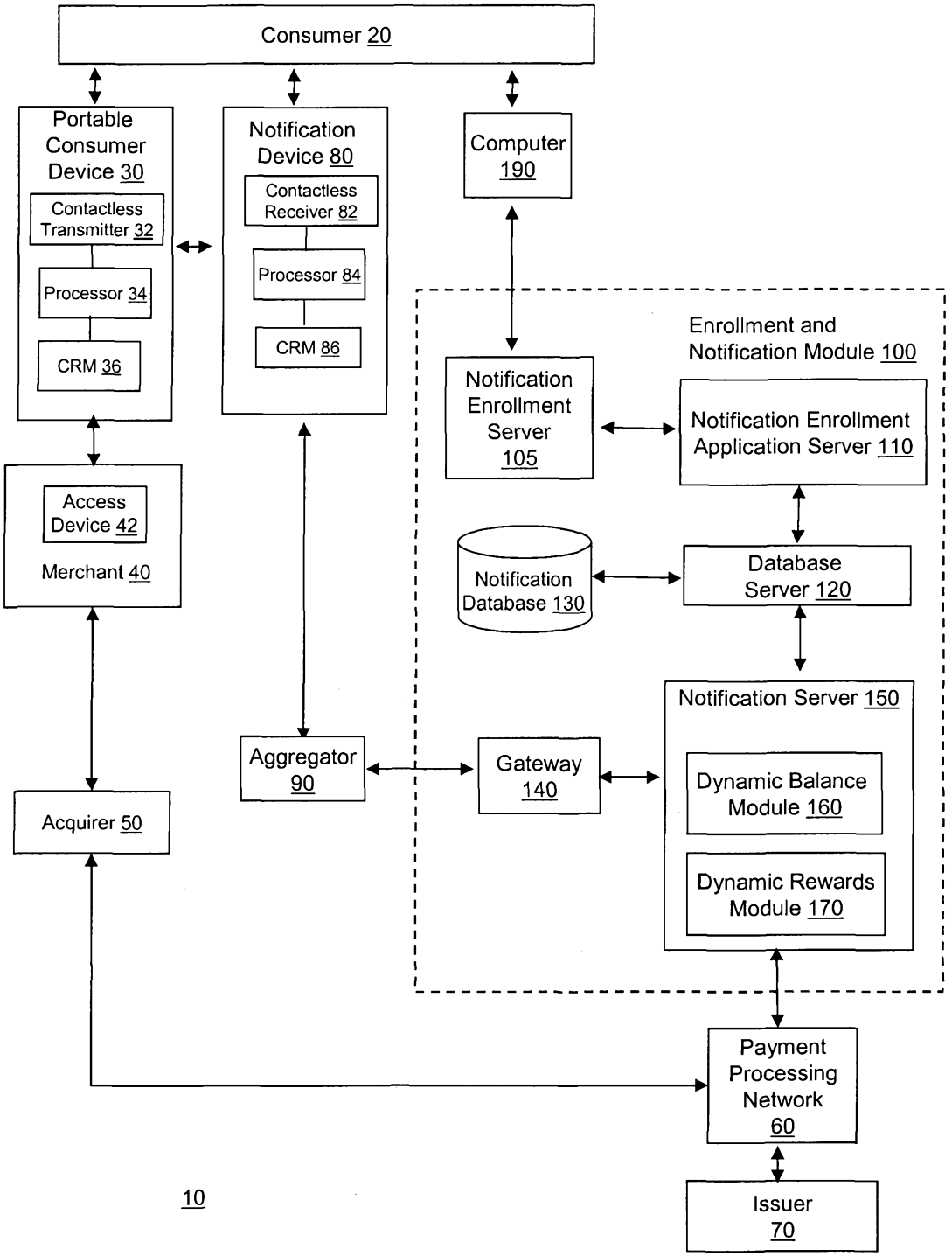
DATED this fourth Day of May, 2012

Visa U.S.A. Inc.

Visa International Service Association

Patent Attorneys for the Applicant

SPRUSON & FERGUSON


Consumer 20
Portable Consumer Device 30
Contactless Transmitter 32
Processor 34
CRM 36
Notification Device 80
Contactless Receiver 82
Processor 84
CRM 86
Computer 190
Enrollment and Notification Module 100
Notification Enrollment Server 105
Notification Enrollment Application Server 110
Notification Database 130
Database Server 120
Notification Server 150
Dynamic Balance Module 160
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Access Device 42
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Aggregator 90
Gateway 140
Acquirer 50
Payment Processing Network 60
Issuer 70
10

FIG. 1

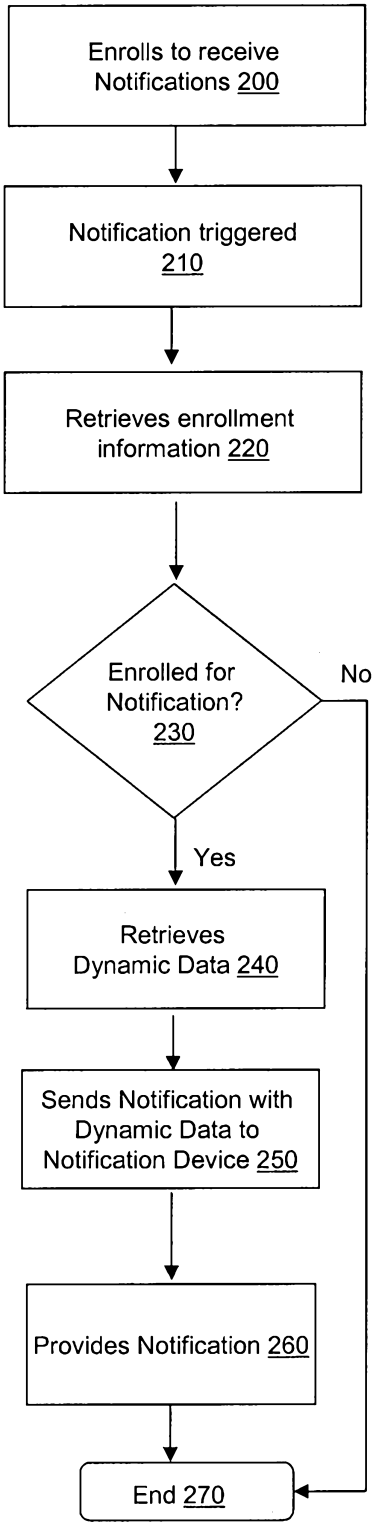
Enrolls to receive Notifications 200
Notification triggered 210
Retrieves enrollment information 220
Enrolled for Notification? 230
No
Yes
Retrieves Dynamic Data 240
Sends Notification with Dynamic Data to Notification Device 250
Provides Notification 260
End 270

FIG. 2

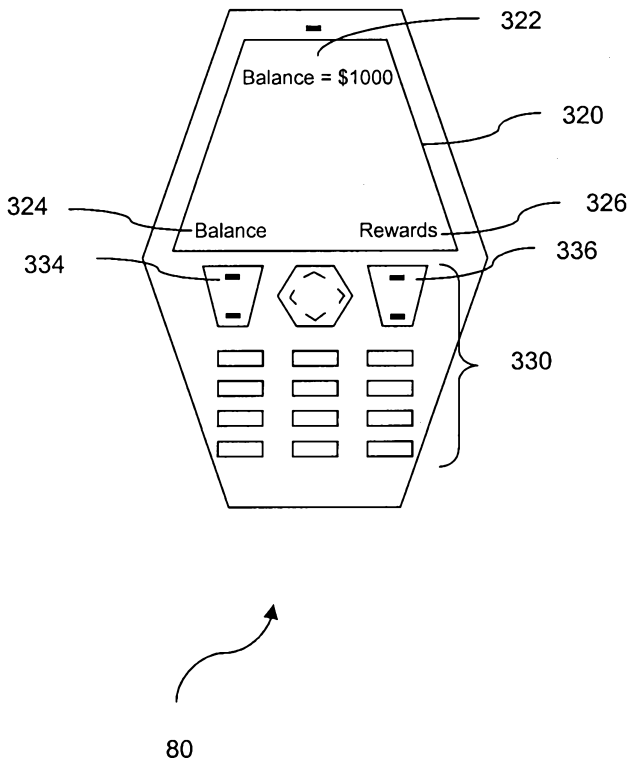

FIG. 3